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(54) Title: COPOLYMERS OF ETHYLENE WITH  $\alpha$ -OLEFINS

(57) **Abstract.** Copolymers of ethylene with  $\alpha$ -olefins which have a molar mass distribution  $M_w/M_n$  of from 1 to 8, a density of from 0.85 to 0.94 g/cm<sup>3</sup>, a molar mass  $M_n$  of from 10.000 g/mol to 4 000 000 g/mol and a CDBI of less than 50% and in which the side chain branching of the maxima of the individual peaks of the short chain branching distribution is in each case greater than 5 CH<sub>2</sub>/1 000 carbon atoms, a process for preparing them, a catalyst suitable for preparing them and fibers, moldings, films or polymer mixtures in which these copolymers are present.